

How to Open a Glass Vial



Disclaimer

A series of booklets has been developed by the Clinical Skills Lab team (staff, recent graduates and students) from the School of Veterinary Sciences, University of Bristol, UK. Please note:

- Each booklet illustrates one way to perform a skill and it is acknowledged that there are often other approaches. Before using the booklets students should check with their university or college whether the approach illustrated is acceptable in their context or whether an alternative method should be used.
- The booklets are made available in good faith and may be subject to changes.
- In using these booklets you must adopt safe working procedures and take your own risk assessments, checked by your university, college etc. The University of Bristol will not be liable for any loss or damage resulting from failure to adhere to such practices.

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Year Group: BVSc3 +



Equipment list: How to Open a Glass Vial

Equipment for this station:

- 10ml glass vial of water for injection
- Swab
- Bottle of surgical spirit
- Paper towel
- 10ml syringe
- 22G needle
- Vial (ampule) 'cap' (for 'Ampule Cap Method')

Considerations for this station:

- Be careful when handling glass
- Needles are sharp and can cause injury
- Dispose of sharps in a sharps bin
- Please refer to the instruction booklet 'CSL_U02 Safe Use of Needles' for instructions on how to use, dispose of or re-cap needles (e.g. if reusing needles)
- For more information please refer to 'General Risk Assessment Form: Needles CSL_R03' (in the CSL)
- Please reuse syringes

Anyone working in the Clinical Skills Lab must read the 'CSL_I01 Induction' and agree to abide by the 'CSL_I00 House Rules' & 'CSL_I02 Lab Area Rules'

Please inform a member of staff if equipment is damaged or about to run out.



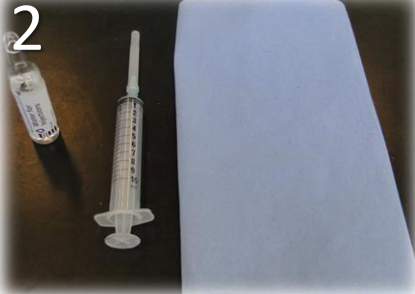
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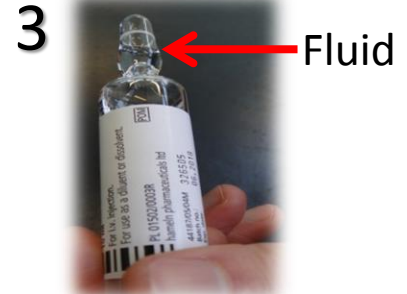
How to Open a Glass Vial: Paper Towel Method



It is good practice to wipe the vial neck with an alcohol swab (or a swab soaked in surgical spirit) prior to opening. In the Clinical Skills Lab (CSL) if a swab is not available start the station at step 2.



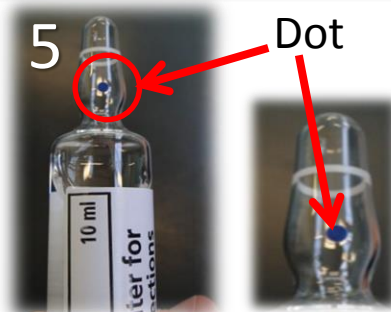
Prepare all the equipment i.e. a couple of sheets of paper towel, a needle and syringe (attach the capped needle to the syringe using an aseptic technique - refer to booklet 'CSL_U02 Safe use of Needles').



The vial may have fluid in the top part above the narrow neck – see red arrow in photo above.



If there is fluid above the neck, hold the glass vial in your non-dominant hand and gently flick the top of the vial (using your dominant hand) until all the fluid is in the base of the vial.



Orientate the vial so that the coloured (blue) dot is facing towards you (indicated by the red arrows in the photos above).



Pick up the sheets of paper towel with your dominant hand and place them around the vial top with your thumb just above the position of the coloured dot and your index finger on the other side. Alternatively have your thumb on the side furthest away and your index finger just above the blue dot.



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Clinical Skills:

How to Open a Glass Vial: Paper Towel Method

7



Snap the vial neck by applying pressure while bending the neck away from the dot (and away from yourself).

8



Dispose of the broken off glass top in a sharps bin.

9



Hold the vial with your non-dominant hand and with your dominant hand pick up the syringe and needle and withdraw the liquid. Keep the vial at an angle while drawing up the contents.

10



If air is drawn into the syringe there may be insufficient space for all the liquid. If this is the case, stop drawing up the liquid, hold the syringe with the needle pointing upwards so the air is at the top and press the plunger to expel the air. Then continue drawing up the liquid.

11



It may be necessary to invert the vial to remove the last drops of liquid. Be careful not to inject air and break the surface tension or the liquid will pour out.

12



Dispose of the empty vial in a sharps bin and safely recap the needle (see booklet 'CSL_U02 Safe use of Needles').



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Clinical Skills:

How to Open a Glass Vial: Ampule Cap Method

1



It is useful to be aware of other methods for opening vials e.g. 'Ampule Cap Method' using a single-use cap.

N.B. First complete steps 1 – 5 described in the previous section 'How to Open a Glass Vial: Paper Towel Method'

2



Place the cap over the ampule (vial) top, slotting the cap end with the tight 'collar' over the top of the ampule, until it clicks into place.

3



Hold the cap firmly in one hand and the body of the ampule (vial) in the other hand.

4



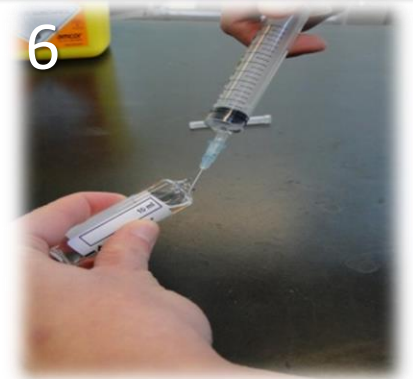
Firmly and steadily bend the cap away from the coloured dot (visible on the vial neck) until the vial snaps at the neck.

5



Dispose of the cap (containing the broken vial top) into a sharps bin. The cap is single use only.

6



Continue to aspirate the contents of the vial as described in 'How to open a glass vial – paper towel method' in the previous pages.



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How to Open a Glass Vial: Other Methods & How to Withdraw Medication

- There are other tools designed specially to open a vial, for example an 'Ampule Opener'.



- It is possible to use the barrel of an empty syringe; place the barrel over the neck of the vial and snap it off. See YouTube video: "Techniques to break an ampule and withdraw out from an ampule" or scan the QR code:



- To clarify the correct way to withdraw medications using a needle and syringe see YouTube video: "Withdraw medication from a vial" or scan the QR code:





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Resetting the station: How to Open a Glass Vial

1. Empty the water for injection in the syringe down the sink
2. Leave the needle and syringe at the station
3. Ensure that all sharps have been disposed of in a sharps bin
4. Put the paper towel in the bin
N.B. If contaminated, dispose of in clinical waste
5. Leave the area tidy ready for the next person

Station ready for the next person:



Please inform a member of staff if equipment is damaged or about to run out.



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I wish I'd known:

How to Open a Glass Vial

- Try to apply a light, even pressure when snapping the neck of the vial to avoid shattering the glass. The pressure should only be applied by the hand snapping the neck, do not apply pressure to the base of the vial with the other hand.
- Avoid any pushing, pulling, or twisting actions while applying pressure on the glass vial to open it.
- Always apply pressure away from the coloured dot, never in any other direction.
- If in practice you do not have any suitable paper towel, a swab or piece of cloth can be used instead.
- If the glass vial shatters, do not use the contents. Open a new vial.
- Glass vials come in various sizes including 2ml, 5ml and 10ml. The same approach applies when opening any of them.
- Some vials come with a metal file to score the neck. The operator then forces the top away from the score mark (i.e. the same as when applying pressure away from the coloured dot)